UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,676	01/24/2000	Jerome Meric	1581.0540001	6128

26111 7590 03/10/2004

STERNE, KESSLER, GOLDSTEIN & FOX PLLC
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
NGUYEN, VAN H	

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/489,676	MERIC ET AL.	
	Examiner	Art Unit	
	VAN H NGUYEN	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) *41 and 42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of claims 1-40 in Paper No. 7 (filed December 19, 2003) is acknowledged.

2. Claims 1-42 are pending in this application. Claims 41-42 are withdrawn from consideration.

3. Applicant is required to cancel non-elected claims 41-42 in the next response to this office action.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in EPO on July 24, 1997. It is noted, however, that applicant has not filed a certified copy of the 97401793.1 application as required by 35 U.S.C. 119(b).

5. To ensure proper consideration and to the extent required by 37 CFR 1.56, Applicant is required to supply a copy of the publication reference cited in the specification because it is not readily available to the Examiner (e.g., see page 2, lines 11-12).

Specification

6. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Applicant is required to submit a new specification and a statement that indicated no new matter has been added.

7. The disclosure is objected to because of the following informalities:

"*between the or each logical identifier and the or each feature independently of the interface identifier assigned to the or each feature*" (page 3, lines 14-15) should be "*between*

each logical identifier and each feature independently of the interface identifier assigned each feature."

Applicant is required to review the entire specification and make appropriate corrections.

Claim Objections

8. Claims 1, 2, 18, and 19 are objected to because of the following informalities:

- In claim 1, lines 10-11, "*between the or each logical identifier and the or each feature independently of the interface identifier assigned to the or each feature*" should be "*between each logical identifier and each feature independently of the interface identifier assigned to each feature*"

- In claim 2, line 2, "*based on the or each interface identifier*" should be "*based on each interface identifier*"

- In claim 18, lines 2-3, "*the or each interface identifier*" should be "*each interface identifier*"

- In claim 18, lines 10-12, "*between the or each logical identifier and the or each feature independently of the interface identifier assigned to the or each feature*" should be "*between each logical identifier and each feature independently of the interface identifier assigned to each feature*" should be "*each interface identifier*"

- In claim 19, lines 2-3, "*the or each application*" should be "*each application*"

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- As to claim 1, the limitations "the feature" (line 3) "at least one said feature" (line 5) and "the corresponding feature" (line 7) lack antecedent basis.

- As to claim 18, the limitations "the corresponding feature" (line 8) and "the feature" (line 15) lack antecedent basis.

- As to claim 34, the limitations "the corresponding feature" (line 11) and "the feature" (lines 17-18) lack antecedent basis.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Haroun et al.** (U.S. 5, 787,259).

12. **As to claim 1,** Haroun teaches the invention substantially as claimed including a method of communicating data, via a device driver, between an application and an interface having at least one feature to which a corresponding interface identifier is assigned, the assignment of the interface identifier to the feature being susceptible to change after at least one event (*abstract and fig. 1)*, the method comprising:

- for the at least one feature, storing a corresponding logical identifier *(col.8, lines 39-col.9, line 35);*and

- maintaining correspondence between each logical identifier and each feature independently of the interface identifier assigned to each feature so that communication between the application and the device driver directed using a given logical identifier remains associated with the corresponding given feature following a change in the assignment of the corresponding interface identifier to the feature *(fig.6 and associated text in col.9, line 36-col.10, line 41).*

Haroun does not explicitly teach "providing the logical identifier to the application for directing communication associated with a corresponding feature between the device driver and the application."

Haroun, however, discloses " *In addition to identifying the parameters to be controlled, the minidriver provides the operating system with information that permits the operating system*

or applications software to control those parameters. This information may take the form of a string table that contains all of the commands necessary to control the device. The applications or operating system software may control the operating parameters of the device using commands provided in the string table. Each string in the string table includes a string identifier. The string identifier has a standard format that includes the identity of the device, the type of device" (col.8, lines 39-60).

It would have been obvious to one of ordinary skill in the art to have applied the teaching of Haroun for "providing the logical identifier to the application for directing communication associated with the corresponding feature between the device driver and the application" in order to provide a means for efficiently transmitting commands and data between the data processing system and the consumer electronics devices (e.g., a television, a video cassette recorder, a digital versatile disk player, a compact disk player, and a receiver).

13. **As to claim 2,** Haroun teaches communication between the interface and the device driver is directed based on each interface identifier *(col.8, line 39-col.9, line 35).*

14. **As to claim 3,** Haroun teaches compiling a list of logical identifiers and corresponding interface identifiers for all features meeting pre-determined criteria *(col.8, lines 47-65).*

15. **As to claim 4,** Haroun teaches the device driver is arranged to communicate the interface identifier assigned to a logical identifier to the application on request *(col.8, line 39-col.9, line 35).*

16. **As to claim 5,** Haroun teaches the device driver is arranged to accept requests from an application to define connections between physical devices connected to the bus using at least

one logical identifier in place of an interface identifier *(fig.6 and associated text incol.9, line 36-col.10, line 41).*

17. **As to claim 6,** Haroun teaches the application is arranged to communicate with the device driver via device manager means *(col.9, lines 36-61).*

18. **As to claim 7,** Haroun teaches at least one the feature of the interface comprises a peripheral connected to the interface and the corresponding interface identifier comprises the physical address assigned to that peripheral, the logical identifier comprising a logical address assigned to the peripheral *(fig.1; col.4, lines 5-30; and col.9, lines 15-24).*

19. **As to claim 8,** Haroun teaches maintaining correspondence includes interrogating each peripheral to which a logical address is assigned to determine the physical address assigned to the peripheral following a bus reset *(col.10, lines 5-41).*

20. **As to claim 9,** Haroun teaches the device driver is arranged to communicate the interface identifier assigned to a logical identifier to the application on request, and wherein communicating the interface identifier for a given peripheral comprises communicating the physical address of the peripheral and also includes communicating a unique node identifier containing further information identifying the peripheral *(fig.6 and associated text incol.9, line 36-col.10, line 41).*

21. **As to claim 10,** Haroun teaches at least one the feature of the interface comprises a channel of defined parameters available via the interface and the corresponding interface identifier comprises the interface channel number, the logical identifier comprising a logical channel identifier *(col.8, lines 11-34 and col.9, lines 44-61).*

22. **As to claim 11,** Haroun teaches the device driver is arranged to receive a request from an application to allocate a channel of defined parameters and to return a logical channel identifier if allocation is successful *(col.8, lines 11-34 and col.9, lines 44-61).*

23. **As to claim 12,** Haroun teaches the device driver is arranged to accept a preferred interface channel number and to allocate the preferred interface channel if available, and to allocate a free channel if the preferred interface channel is not available or if no preferred interface channel is specified (*col.9, lines 25-61).*

24. **As to claim 13,** Haroun teaches the device driver is arranged to receive an identifier of a preferred interface channel, to recognise a predetermined key in place of a valid interface channel number as indicating that no preferred interface channel is specified, and to report an error to the application if other invalid interface channel numbers are specified (*col.8, line 66-col.9, line 24).*

25. **As to claim 14,** Haroun teaches the device driver is arranged to communicate the interface channel number to the application, and at least one other parameter selected from: the maximum rate allocated to the channel; the rate currently available; the number of connections (if any) using the channel; and the identifiers of each connection using the channel *(col.2, lines 18-27 and col.4, lines 5-17).*

26. **As to claim 15,** Haroun teaches the device driver is arranged to accept requests from an application to define one or more connections between physical devices attached to the interface by reference to logical addresses and logical channel identifiers *(fig.6 and associated text in col.9, line 36-col.10, line 41).*

27. **As to claim 16,** Haroun teaches the device driver is arranged to establish at least a broadcast connection *(fig.1 and associated text in col.4, lines 5-60).*

28. **As to claim 17,** Haroun teaches the device driver is arranged to signal one or more events to an application, the events preferably including reset of the bus (preferably beginning and end of reset) and a change in bus topology or channel or connection parameters *(col.8, lines 39-60 and col.10, lines 5-41).*

29. **As to claim 18,** it is directed to a device driver for performing the method of claim 1, and is similarly rejected under the same rationale.

30. **As to claim 19,** Haroun teaches the device driver is implemented in software, preferably executable by processing means which runs each application *(col.5, lines 2-6).*

31. **As to claims 20-33,** they are directed to a device driver for performing the method of claims 3-5, 7-17 respectively, and are similarly rejected under the same rationale.

32. **As to claim 34,** the rejection of claim 1 above is incorporated herein in full. Claim 34, further recites run-time engine means, interface means, and device driver means.

Haroun teaches run-time engine means, interface means, and device driver means *(figs. 1 and 6).*

33. **As to claim 35,** Haroun teaches means for receiving broadcast data, the interface being arranged for connection to a digital video recorder or digital display device or computer for display or storage of at least a portion of the received data *(fig.1 and associated text in col.4, lines 5-60).*

34. **As to claim 36,** Haroun teaches the device driver means is arranged to cooperate with further device driver means for modifying the received data stream to produce a modified data stream for passing to the interface *(col.8, lines 11-19).*

35. **As to claim 37,** Haroun teaches the interface conforms to the IEEE 1394 standard or a variant thereof *(fig.1; col.4, lines 7-8; and col.5, lines 47-48).*

36. **As to claim 38,** Haroun teaches the application is run in an interpreted language and the device driver is compiled *(fig.6 and associated text incol.9, line 36-col.10, line 41).*

37. **As to claim 39,** Haroun teaches the device driver is arranged to transmit commands for controlling a digital video recorder from the application and/or to receive data concerning the information stored on the digital video recorder *(fig.1 and associated text in col.4, lines 5-60).*

38. **As to claim 40,** Haroun teaches the data to be communicated includes data in MPEG format *(col.5, lines 33-45).*

Conclusion

39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Schwaderer et al. (U.S. 6393496) teaches "Operating system and network independent application program interface for use in an intelligent communication device."

- Wang (U.S. 6286054) teaches "Method and system for supporting multiple capture devices."

- Nguyen et al. (U.S. 6219703) teaches "Method and apparatus for constructing a device management information base in a network management station."

- Iwamura (U.S. 5883621) teaches "Device control with topology map in a digital network."

- Hoffman et al. (U.S. 5815678) teaches "Method and apparatus for implementing an application programming interface for a communications bus."

- Osakabe et al. (U.S. 5608730) teaches "Bi-directional communication system."

40. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H NGUYEN whose telephone number is (703) 306-5971. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. The examiner can also be reached on alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9000.

Any response to this action should be mailed to:
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450
or fax to:
(703) 746-7239 (for formal communications intended for entry)
(703) 746-7238 (for After Final communications)
(703) 746-7240 (for informal or draft communications)

VHN

MENG-AL T. AN
SUPERVISOR PATENT EXAMINER
TECHNOLOGY CENTER 2100